

CLAIMS

WHAT IS CLAIMED IS:

1. A sheet media feeder, comprising:
5 a biasing structure to bias media sheets toward a media engaging structure; and,
an adjustment control operably secured to the biasing structure to adjust a biasing force applied to the media sheets.
- 10 2. The adjustable biasing device of claim 1, wherein said biasing structure is a spring.
3. The adjustable biasing device of claim 2, wherein said spring is a compression spring.
- 15 4. The adjustable biasing device of claim 2, wherein said spring is operably secured within an opening, and retractable within said opening defining a retracted position.
- 20 5. The adjustable biasing device of claim 4, wherein said adjustment control extends a portion of said spring from said opening.
6. The adjustable biasing device of claim 5, wherein:
said sheet media feeder has a frame;
25 said opening is defined by a threaded collar operably secured to said frame; and,
said adjustment control is a threaded member sized to engage said threaded collar defining a first direction of rotation of said threaded member relative to said threaded collar in which said spring is moved toward said
30 stack to increase the force applied by the spring to said stack.

7. The adjustable biasing device of claim 6, wherein said threaded member resists movement in an opposite second direction of rotation.

5 8. The adjustable biasing device of claim 4, wherein:
said opening is threaded with a first defined pitch;
said spring is a coil spring having a second defined pitch; and,
said spring is operably received within the threads of said opening in
said retracted position.

10 9. The adjustable biasing device of claim 8, wherein said first
defined pitch is less than said second defined pitch.

10. The adjustable biasing device of claim 4, wherein said opening is
a threaded opening, and said adjustment control is a threaded control knob
15 operably secured to said threaded opening.

11. The adjustable biasing device of claim 10, wherein said threaded
control knob has a visual position indicator operably secured thereto.

20 12. The adjustable biasing device of claim 10, further including a
strain gauge operably secured to the biasing member.

13. A printer comprising:
a biasing device adapted to apply a biasing force urging a stack
25 of media toward a media engaging structure; and,
an adjustment control operably secured to said biasing device for
adjusting the amount of biasing force urging the stack of media toward the
media engaging structure.

30 14. The printer of claim 13, further including a media storage device
secured to a chassis.

15. The printer of claim 14, wherein said media storage device is detachably secured to the chassis.

5 16. The printer of claim 13, wherein said printer is an ink jet printer.

17. The printer of claim 13, wherein said sheets of media are substantially planar cards.

10 18. The printer of claim 13, wherein:
said biasing device is a spring operably engaging said stack of media;
said spring retractably received within an opening to define a retracted
portion received within said opening and an extended portion extending from
said opening toward said stack of media; said retracted portion having a
15 defined length; and,
said adjustment control regulates the defined length of said retracted
portion.

19. The printer of claim 18, wherein:
20 said biasing device is a compression spring having a first end and an
opposite second end, said second end operably engaging said stack of
media;
said compression spring retractably received within a opening at said
first end; and,
25 said adjustment control regulates the amount of the compression
spring received within the opening.

20. The printer of claim 19, wherein said second end is detachable
from said stack of media, and said spring is fully retractable within said
30 opening.

21. A media feeder for a media path bearing device, the media-path bearing device having a media engaging structure for engaging media within the media feeder and urging the media along the media path, the media
5 feeder comprising;

a frame operably secured to the media-path bearing device, the frame having a storage chamber for storing a plurality of sheets of media in a stack thereby defining a stack of media, said stack of media positioned adjacent to the media engaging structure so as to allow individual sheets of media from
10 said stack of media to be removed one-by-one by the media engaging structure;

a biasing device operably secured to the frame and extending between the frame and the stack of media so as to apply a biasing force urging the stack of media toward the media engaging structure; and,

15 an adjustment control operably secured to said biasing device for adjusting the amount of biasing force urging the stack of media toward the media engaging structure.

22. The media feeder of claim 21, wherein said frame is detachably
20 secured to the media-path bearing device.

23. The media feeder of claim 21, wherein:

said frame includes a substantially planar base structure and a cover operably secured thereto to define the media chamber therein; and,

25 said cover is transparent to allow viewing of said biasing device therethrough.

24. The media feeder of claim 21, wherein:
said biasing device is a spring operably engaging said stack of media;
said spring retractably received within a opening to define a retracted
portion received within said opening and an extended portion extending from
5 said opening toward said stack of media; said retracted portion having a
defined length; and,
said adjustment control regulates the defined length of said retracted
portion.

10 25. The media feeder of claim 24, wherein:
said opening is threaded defining threads therein having a defined first
pitch;
said spring is a coil spring defining coils having a defined second pitch
in an uncompressed position; and,
15 said coils forming the retracted portion are received within the threads
of said opening.

26. The media feeder of claim 25, wherein said defined first pitch is
less than said defined second pitch.

20 27. A method for biasing sheets of media forming a stack of media
within a media feeder said method comprising the steps of:
applying a biasing force substantially normal to the stack of media;
removing sheets of media from the stack of media; and,
25 adjusting the magnitude of the biasing force applied by the media
biasing device to the stack of media.

28. The method for biasing sheets of media of claim 27, further including the initial steps of:

storing the media feeder containing the stack of media therein without the media biasing structure applying a substantial biasing force to the stack of media; and,

operably connecting the media biasing structure to the stack of media prior to using the media feeder.

29. The method for biasing sheets of media of claim 27, wherein said biasing device is a compression spring having a first end received within a opening in the media feeder and an opposite second end operably engaging said stack of media; and said adjusting the amount of biasing force step includes:

extending a portion of said compression spring from said opening as said stack of media is depleted.

30. The method for biasing sheets of media of claim 27, further including the step of detecting the amount of force applied by the biasing device to the stack of media.

31. The method for biasing sheets of media of claim 27, wherein said adjusting the amount of biasing force step further includes positioning a control knob at a predetermined position relative to a detected size of said stack of media.

32. A sheet media feeder comprising:
means for biasing media sheets toward means for engaging media;
and,
means for adjusting a biasing force applied to the media sheets by the means for biasing.

33. The sheet media feeder of claim 32, wherein said means for biasing is a spring.

5 34. The sheet media feeder of claim 32, wherein said means for adjusting is a threaded control knob operably secured to the means for biasing and operably received within a threaded opening on the sheet media feeder.

10 35. The sheet media feeder of claim 32, wherein said threaded opening defines a threaded collar.